

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US2004/003481A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H04L12/56

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 594 356 A (AMERICAN TELEPHONE & TELEGRAPH) 27 April 1994 (1994-04-27) column 1, line 17 - column 6, line 12	1,2,4
Y	-----	3
X	EP 1 133 129 A (TEXAS INSTRUMENTS INC) 12 September 2001 (2001-09-12) column 4, line 55 - column 16, line 50	1,2,4
X	WO 99/48227 A (SAMSUNG ELECTRONICS CO LTD) 23 September 1999 (1999-09-23) page 3, line 1 - page 6, line 11 page 10, line 17 - page 14, line 16	1,2,4
Y	EP 0 998 069 A (INMARSAT LTD) 3 May 2000 (2000-05-03) the whole document	3
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 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"B" earlier document published on or after the International filing date

"L" document which may throw doubt on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the International filing date but later than the priority date claimed

"T" later document published after the International filing date or priority date and not in conflict with the application but which is cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"Z" document member of the same patent family

Date of the actual completion of the International search	Date of mailing of the International search report
24 June 2004	18.11.2004
Name and mailing address of the ISA European Patent Office, P.O. 6818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl Fax: (+31-70) 340-3016	Authorized officer  Kalabic, F

**INTERNATIONAL SEARCH REPORT**International application No.  
PCT/US2004/003481**Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 5.4(a).

**Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-4

**Remark on Protest**

The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-4

Orthogonal frequency division multiplexing

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2. claims: 5-9

Queuing based on the latency time between the layers

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3. claims: 10-16

Adaptation of the transmitting rate within one frame

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4. claims: 17-20

Queuing based on the class of service

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## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
PCT/US2004/003481

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0594356	A 27-04-1994	US 5323390 A AT 199621 T CA 2104755 A1 DE 69329985 D1 DE 69329985 T2 EP 0594356 A2 JP 2931188 B2 JP 6205480 A	21-06-1994 15-03-2001 21-04-1994 12-04-2001 20-09-2001 27-04-1994 09-08-1999 22-07-1994
EP 1133129	A 12-09-2001	EP 1133129 A2 JP 2002084340 A US 2002078249 A1 US 2002078247 A1	12-09-2001 22-03-2002 20-06-2002 20-06-2002
WO 9948227	A 23-09-1999	AU 734199 B2 AU 2857699 A CA 2288779 A1 CN 1256822 T DE 29924422 U1 EP 0985283 A1 JP 2000514993 T WO 9948227 A1 RU 2201033 C2 US 6768728 B1 US 2004136344 A1 BR 9964857 A	07-06-2001 11-10-1999 23-09-1999 14-06-2000 13-03-2003 15-03-2000 07-11-2000 23-09-1999 20-03-2003 27-07-2004 15-07-2004 18-07-2000
EP 0998069	A 03-05-2000	GB 2343342 A CA 2287609 A1 EP 1381186 A1 EP 0998069 A2 JP 2000232687 A	03-05-2000 28-04-2000 14-01-2004 03-05-2000 22-08-2000